

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Original) A flat, hollow brushless motor comprising:

a flattened tubular motor housing sealed at both ends, first and second housing through holes formed in a center of first and second end plate portions on both sides of the motor housing,

a rotor shaft of which a portion of both ends is exposed from the first and second housing through holes,

a tool-mounting hole that extends through a center of the rotor shaft, and

first and second workpiece insertion recesses formed in external surfaces of the first and second end plate portions of the motor housing,

wherein the first and second workpiece insertion recesses are recesses of a prescribed width formed encompassing the first and second housing through holes, respectively, and extending to an external periphery of the motor housing from the housing through holes.

2. (Currently amended) The flat, hollow brushless servomotor according to ~~claim~~Claim 1, wherein the tool-mounting hole has a ~~polygonal cross section such as a~~ hexagonal ~~one~~cross section.

3. (Currently amended) The flat, hollow brushless servomotor according to ~~claim~~Claim 1, wherein the maximum length in an axial direction of the rotor shaft is equal to or less than the thickness between bottom faces of the first and

second workpiece insertion recesses in the first and second end plate portions on both sides of the motor housing.

4. (Currently amended) The flat, hollow brushless servomotor according to ~~claim~~Claim 1, comprising a lead wire laying area extending to an outside in a radial direction from an external peripheral surface of the motor housing,

wherein lead wires disposed along a recess groove formed on an inside surface of the first or second end plate portion of the motor housing are brought out to the lead wire laying area.

5. (Currently amended) The flat, hollow brushless servomotor according to ~~claim~~Claim 1, comprising a detection mechanism for detecting motor magnetic pole positions,

wherein the detection mechanism comprises an FG magnet disposed on one end face of the rotor shaft, and a magnetic sensor ~~such as a Hall element~~ disposed inon an internal surface of the first or second end plate portion facing the FG magnet in the motor housing.

6. (New) A flat, hollow brushless servomotor comprising:

a tubular motor housing sealed at both ends;
first and second end plates closing respective outer sides of said motor housing and forming outer end surfaces thereof, said end plates having central through holes formed therein;

a hollow rotor shaft located between said first and second end plates and including a tool-mounting hole extending axially through a center thereof so that said central through holes and said tool-mounting hole are axially aligned to provide a central axially oriented open aperture extending through said brushless servomotor;

a first workpiece insertion recess formed in an external surface of said first end plate, said first workpiece insertion recess extending radially from said central aperture to an external periphery of said brushless servomotor; and

a second workpiece insertion recess formed in an external surface of said second end plate, said second workpiece insertion recess extending radially from said central aperture to an external periphery of said brushless servomotor.

7. (New) The brushless servomotor according to Claim 6, wherein said brushless servomotor is thin to enable insertion between facing portions of a workpiece for machining of a tip of the facing portions by a machine tool mounted on the rotor shaft and within said central aperture.

8. (New) The brushless servomotor according to Claim 6, wherein said central aperture has a hexagonal cross section.

9. (New) The brushless servomotor according to Claim 6, including a detection mechanism for detecting motor magnetic pole positions.

10. (New) The brushless servomotor according to Claim 9, wherein said detection mechanism comprises a magnet disposed on an end face of the rotor shaft and a magnetic sensor disposed on an inner side of said first end plate.

11. (New) The brushless servomotor according to Claim 6, including a lead wire groove disposed on an inner side of said first end plate for receiving lead wires.

12. (New) The brushless servomotor according to Claim 6, including a machine tool mounted on the rotor shaft, said

machine tool extending axially through said a tool-mounting hole and not extending beyond said central through holes so that said servomotor is capable of insertion between axially spaced facing portions of a workpiece.

13. (New) The brushless servomotor according to Claim 6, including a cylindrical stator assembly having drive coils and an insulator, said stator assembly disposed radially outwardly about said hollow rotor shaft and within said tubular motor housing.